



Brian McNerney  
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National Weather Service

Hydrologic Outlook  
January 2004



# Hydrologic Outlook

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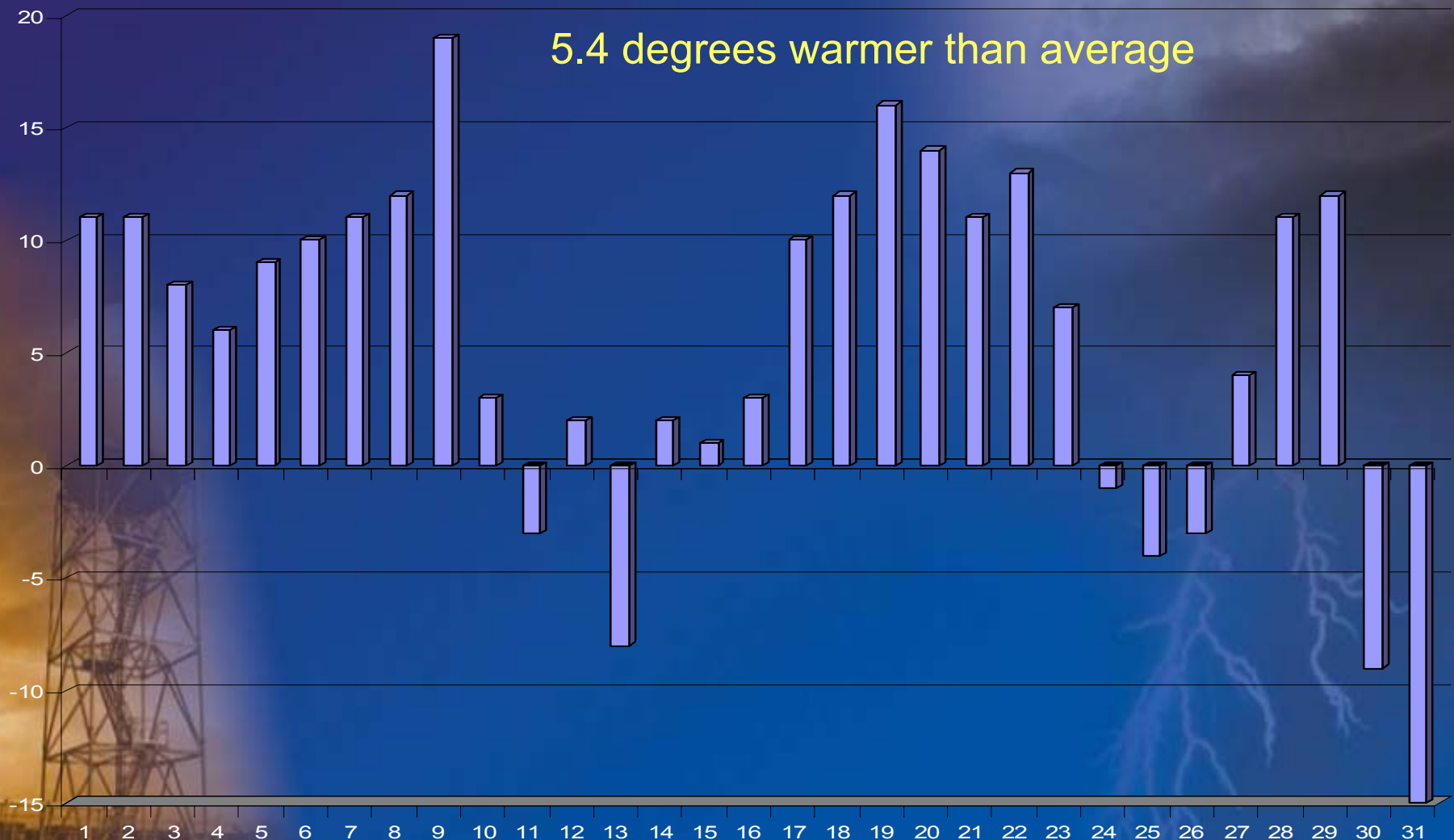
- Temperature



# October

## Salt Lake City Temperature Departure from Normal

5.4 degrees warmer than average

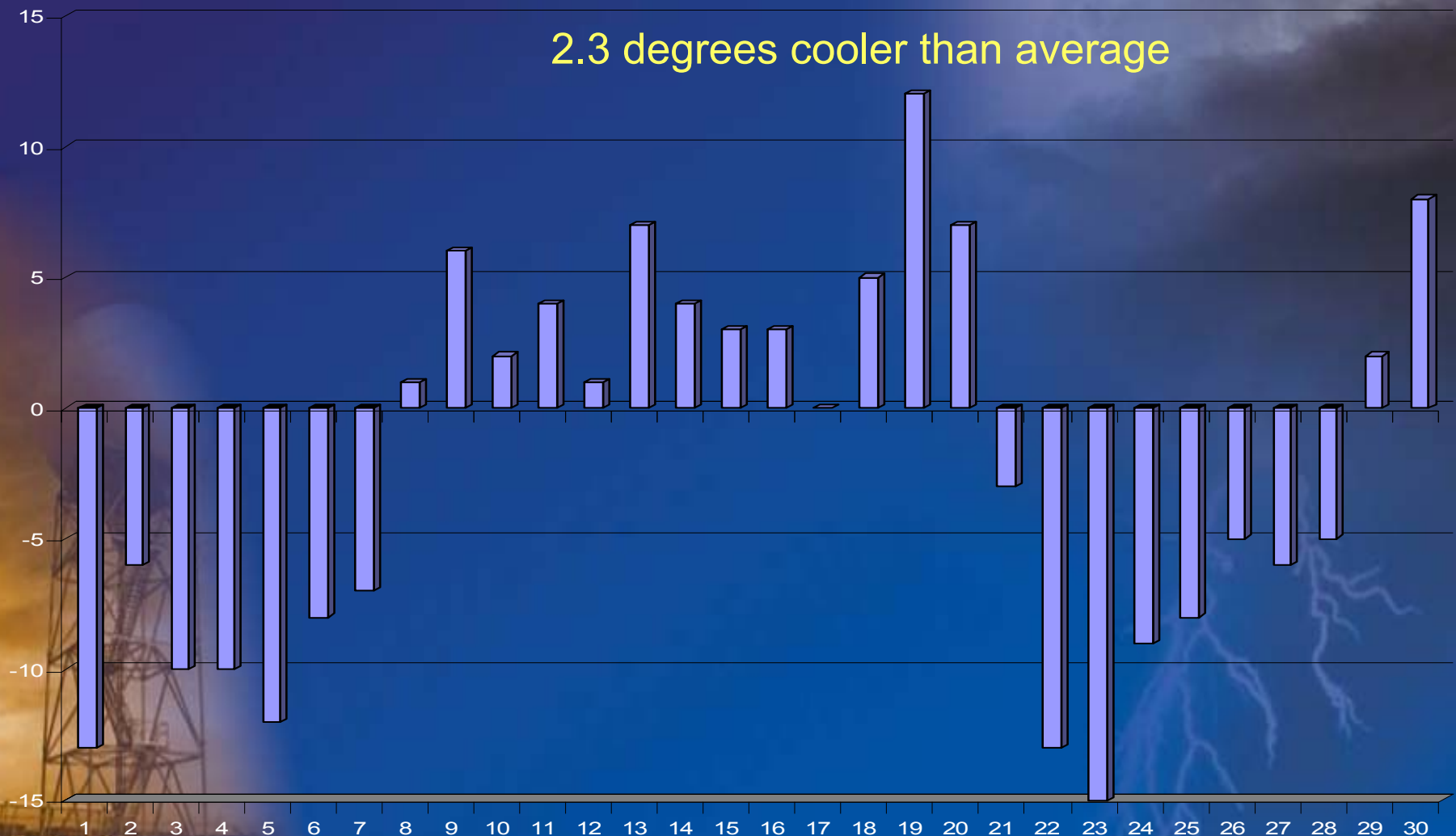




# November

## Salt Lake City Temperature Departure from Normal

2.3 degrees cooler than average

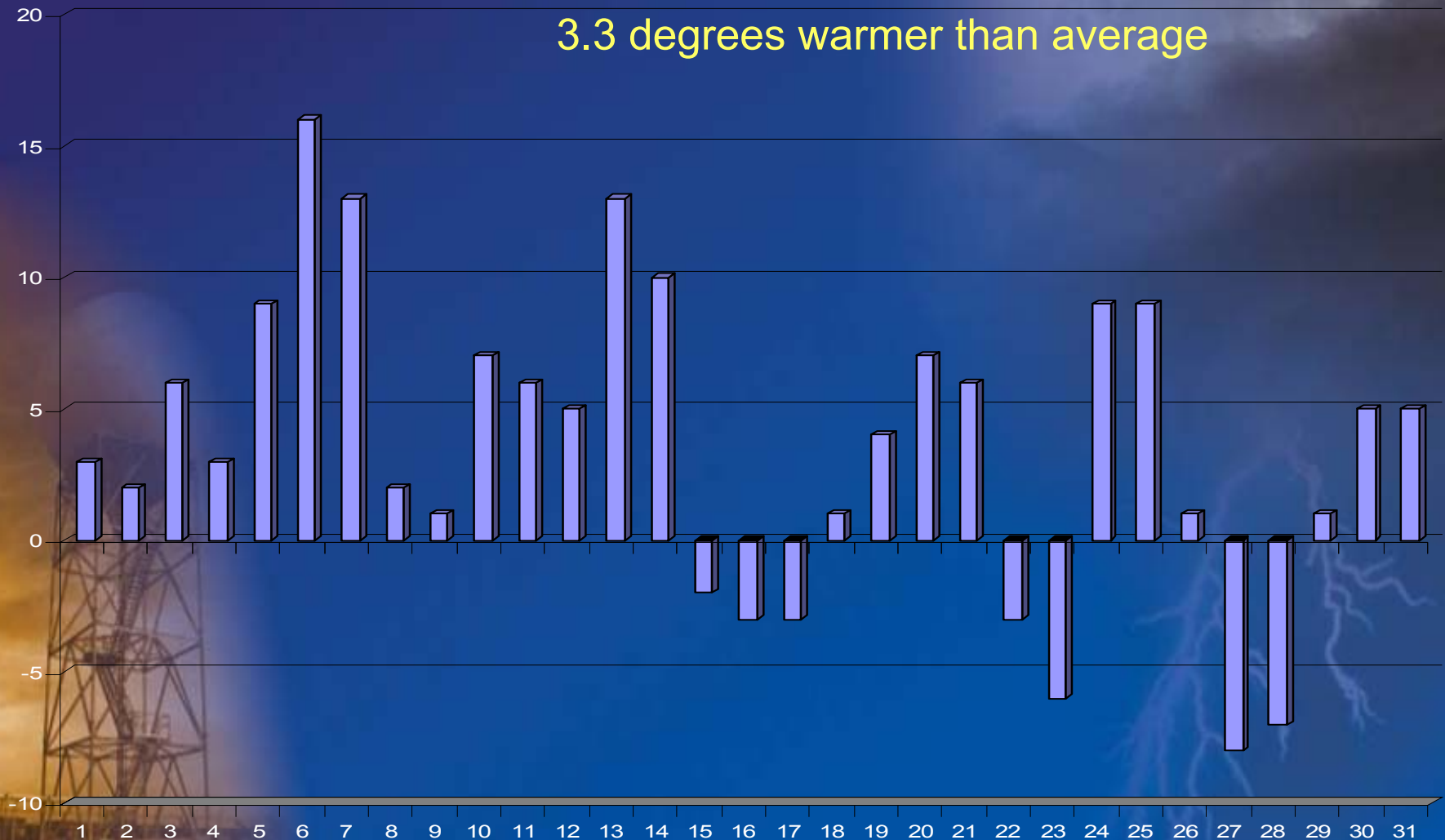




# December

## Salt Lake City Temperature Departure from Normal

3.3 degrees warmer than average





# Hydrologic Outlook

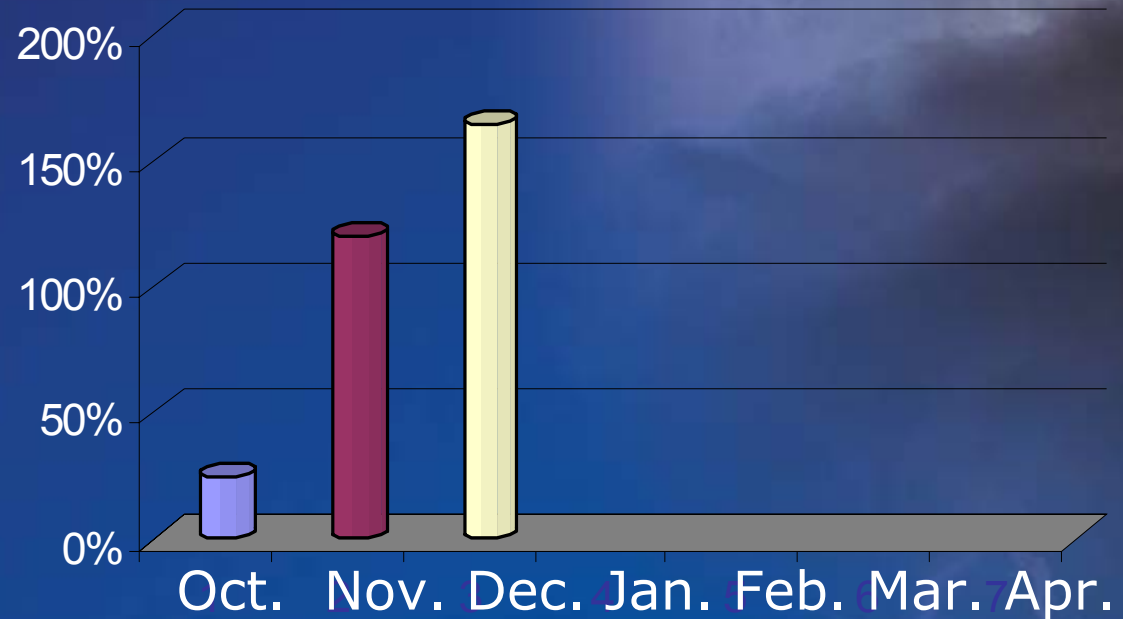
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- Precipitation



# Great Basin Precipitation

Oct.	25%
Nov.	120%
Dec.	165%
Season	105%

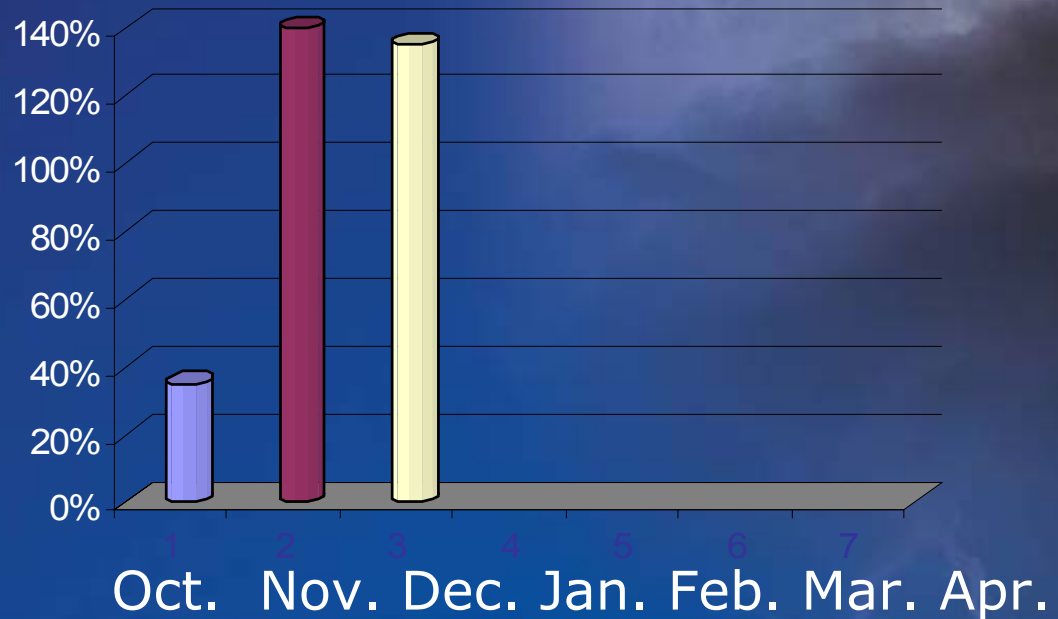






# Green River Basin Precipitation

Oct.	35%
Nov.	140%
Dec.	135%
Season	100%

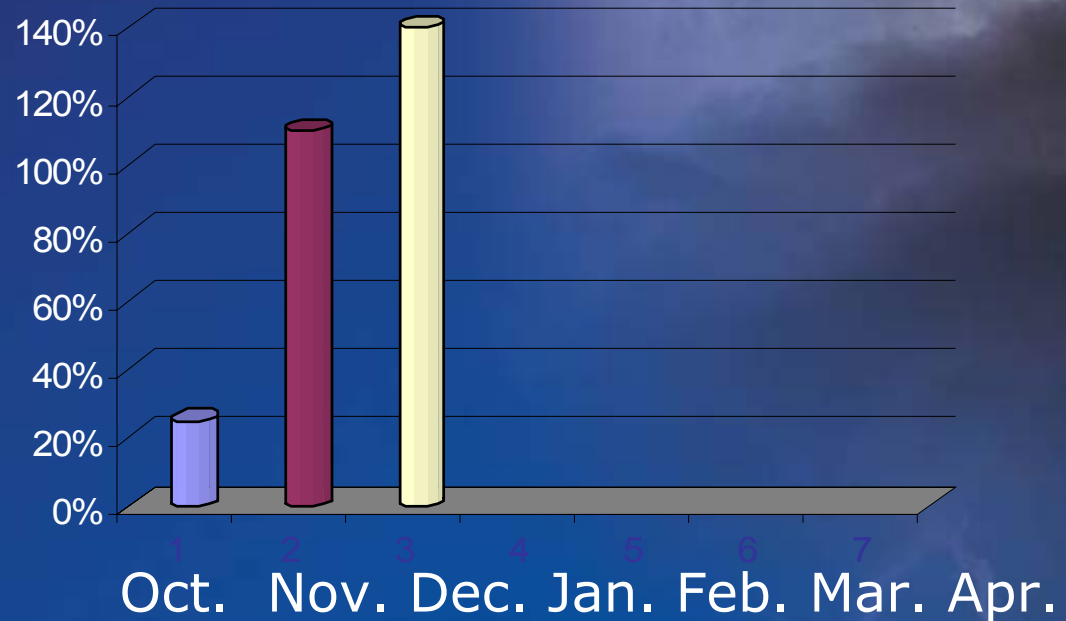






# Sevier Basin Precipitation

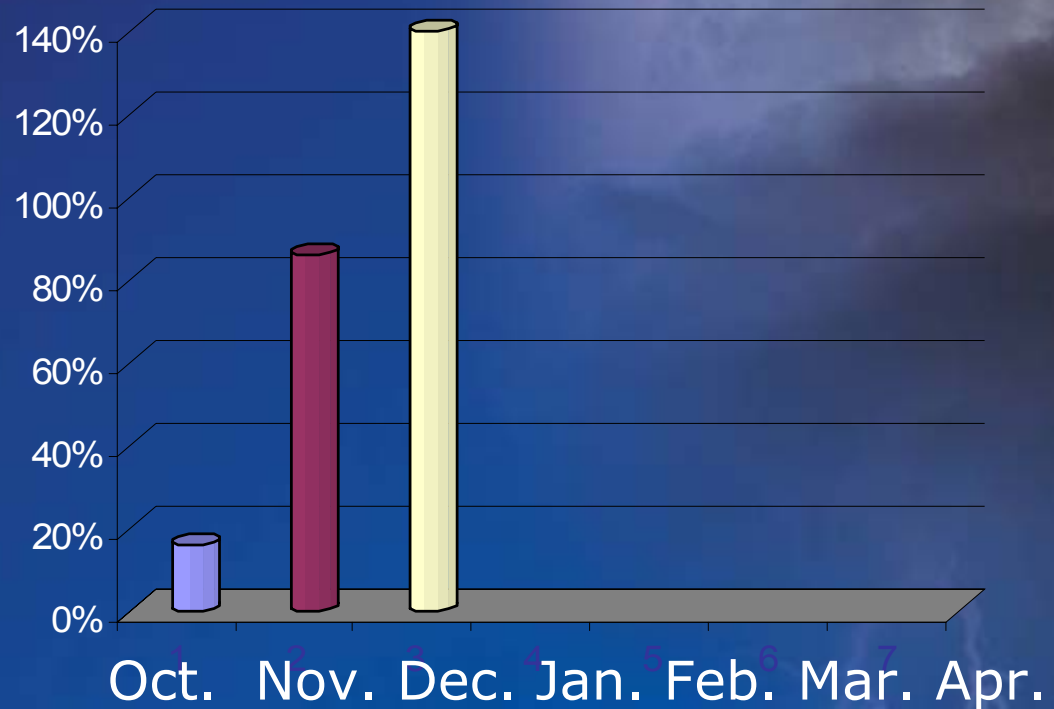
Oct.	25%
Nov.	110%
Dec.	140%
Season	90%





# Virgin River Basin Precipitation

Oct.	16%
Nov.	86%
Dec.	140%
Season	90%



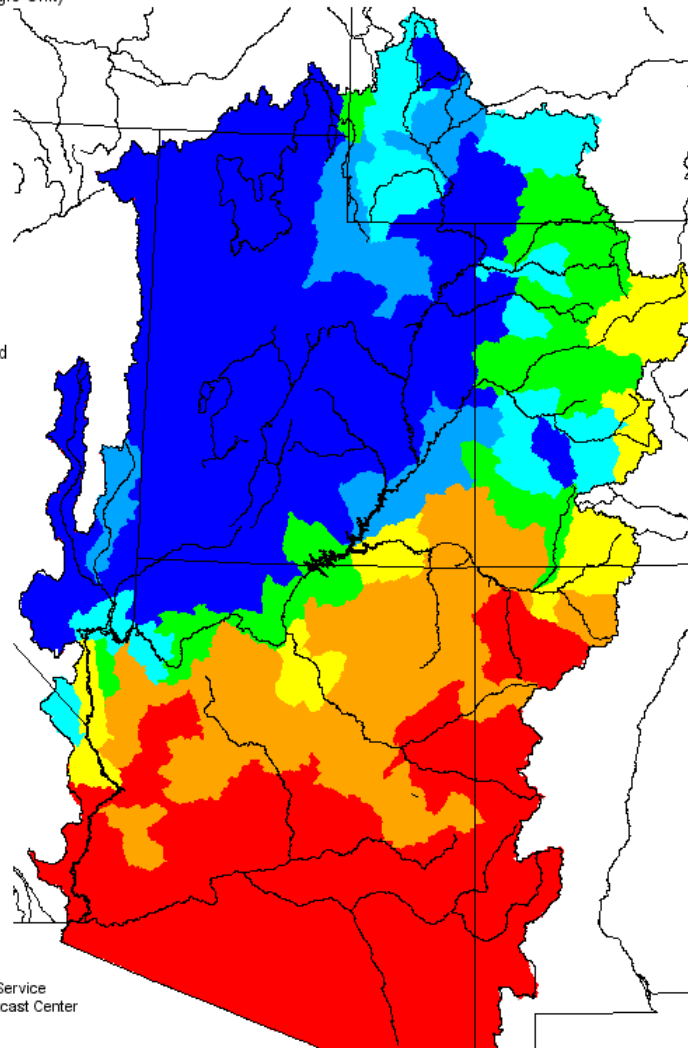
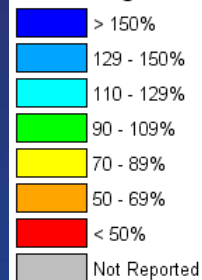


# Precipitation

## Monthly Precipitation for December 2003

(Averaged by Hydrologic Unit)

### % Average



Prepared by  
NOAA, National Weather Service  
Colorado Basin River Forecast Center  
Salt Lake City, Utah  
[www.cbrfc.noaa.gov](http://www.cbrfc.noaa.gov)



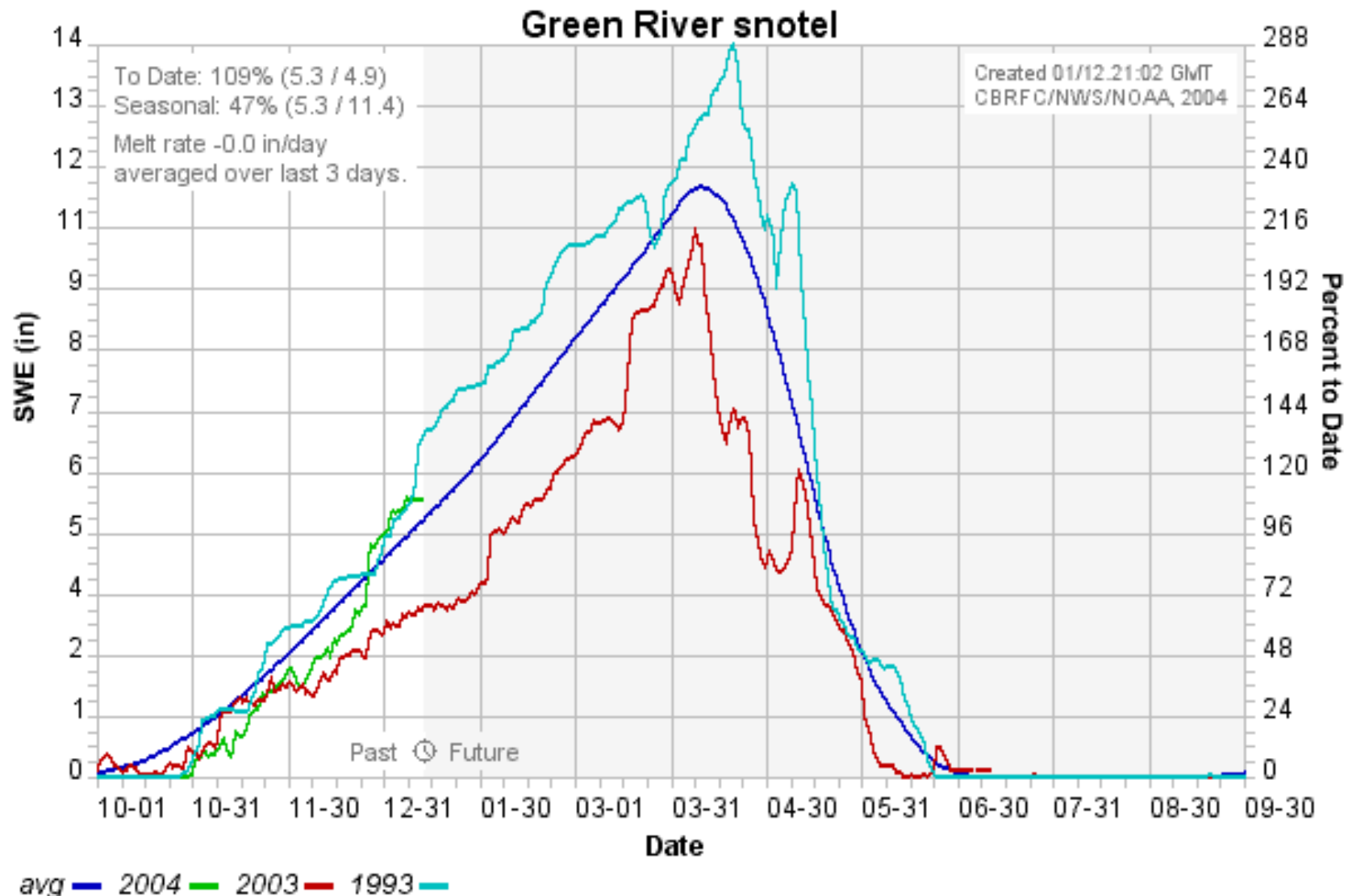
# Hydrologic Outlook

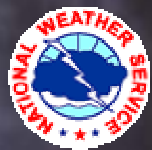
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- Snowpack

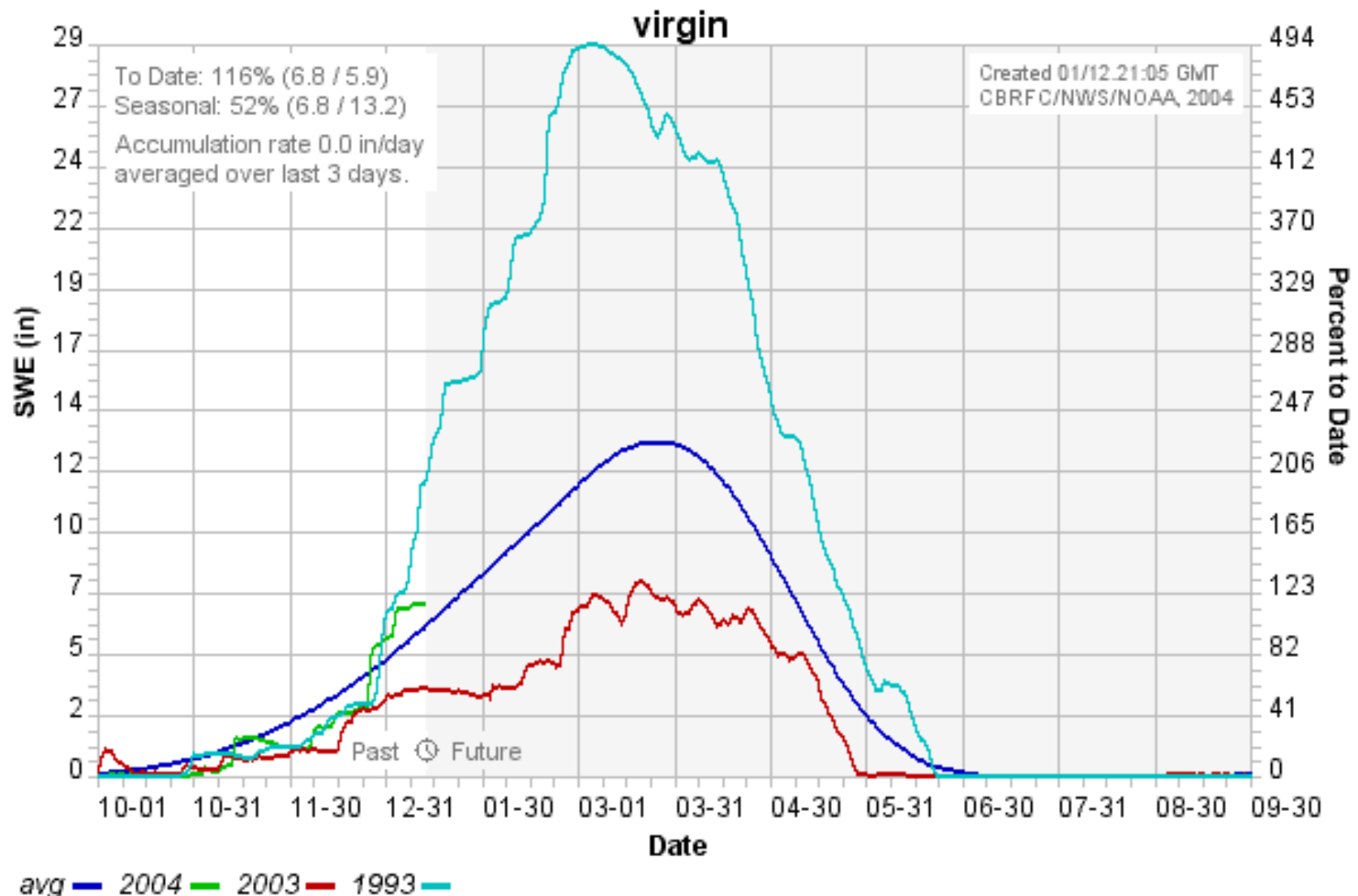


# Basin Snow Averages North and East





# Basin Snow Averages South





# Hydrologic Outlook

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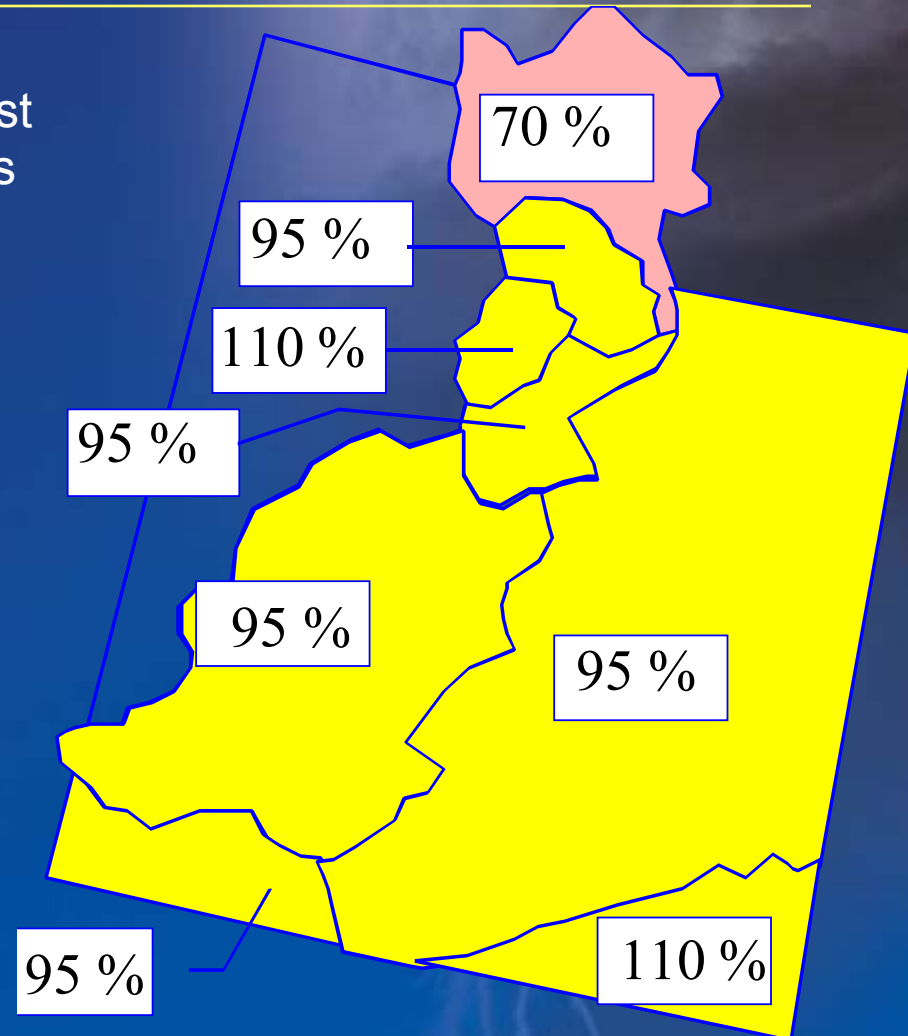
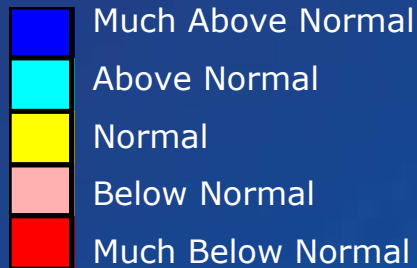
- Water Supply Forecast





# Forecasted Utah Spring Snowmelt Runoff Volumes

January 1<sup>st</sup> 2004  
April Through July Volume Forecast  
Percent of 30 Year Average Flows  
Utah Area River Basins





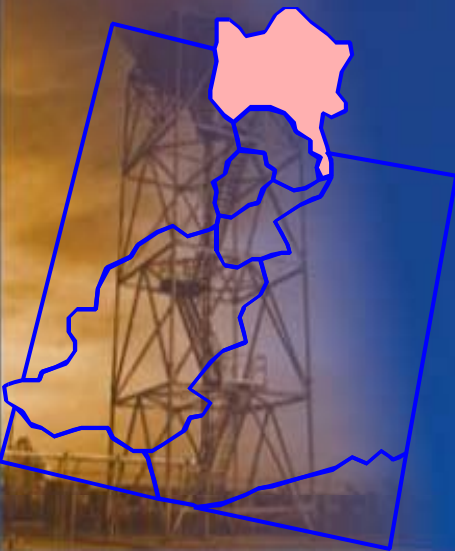
# Forecasted Utah Spring Snowmelt Runoff Volume

January 1<sup>st</sup> 2004

April Through July Volume Forecast  
Percent of 30 Year Average Flows



## Bear River Basin





# Forecasted Utah Spring Snowmelt Runoff Volume

January 1<sup>st</sup>, 2004

April Through July Volume Forecast  
Percent of 30 Year Average Flows



## Weber River Basin

Pineview Res.

103%

Gateway

92%

Ogden River

Lost Creek Res.

85%

East Canyon Res.

110%

Weber River

Rockport Res.

82%

Chalk Creek

80%

Oakley

86%







# Forecasted Utah Spring Snowmelt Runoff Volume

January 1<sup>st</sup>, 2004

April Through July Volume Forecast

Percent of 30 Year Average Flows

## Six Creeks River Basin





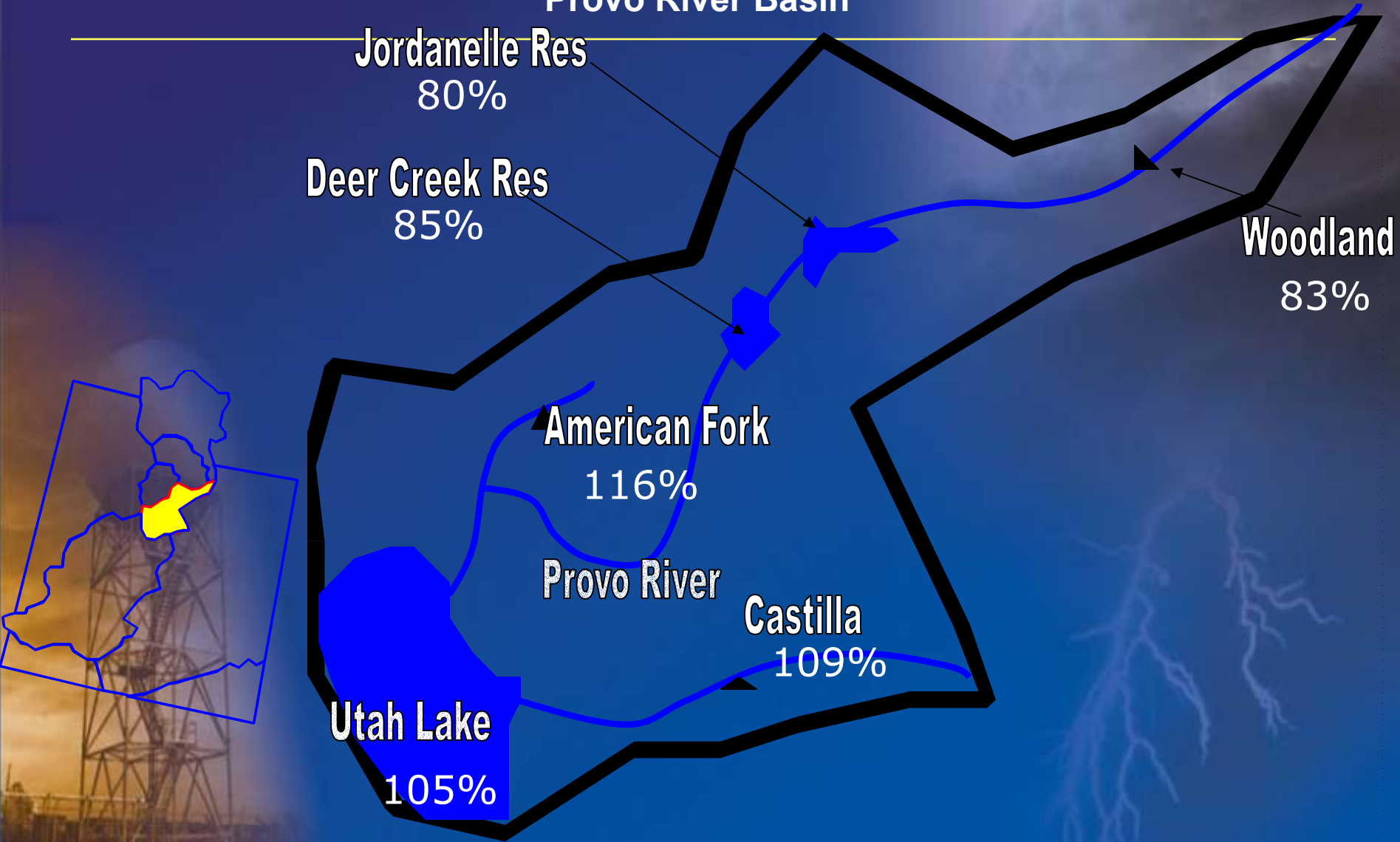
# Forecasted Utah Spring Snowmelt Runoff Volume

January 1<sup>st</sup>, 2004

April Through July Volume Forecast

Percent of 30 Year Average Flows

## Provo River Basin







# Forecasted Utah Spring Snowmelt Runoff Volume

January 1<sup>st</sup>, 2004

April Through July Volume Forecast

Percent of 30 Year Average Flows



## Green River Basin

Strawberry Res.

108%

Starvation Res.

84%

Scofield Res.

100%

Upper Stillwater

90%

Tabiona

91%

Red Fleet Res.

105%

Duchesne

102%

Price River

Green River

88%

Lake Powell Res.

90%

Flaming Gorge Res.

78%

Moon Lake

90%

Myton

81%

Randlett

83%

Colorado River





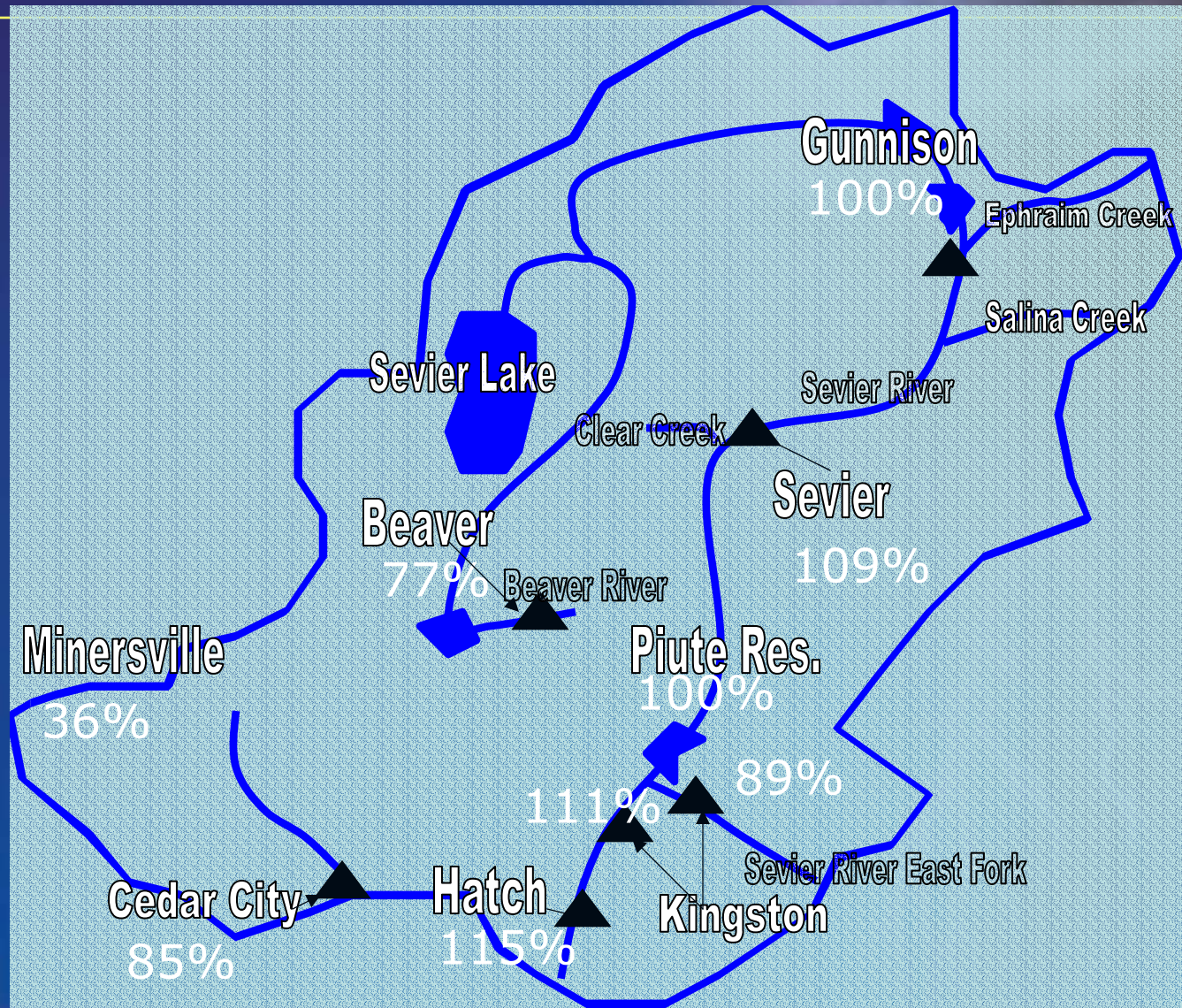
# Forecasted Utah Spring Snowmelt Runoff Volume

January 1<sup>st</sup>, 2004

April Through July Volume Forecast

Percent of 30 Year Average Flows

## Sevier River Basin







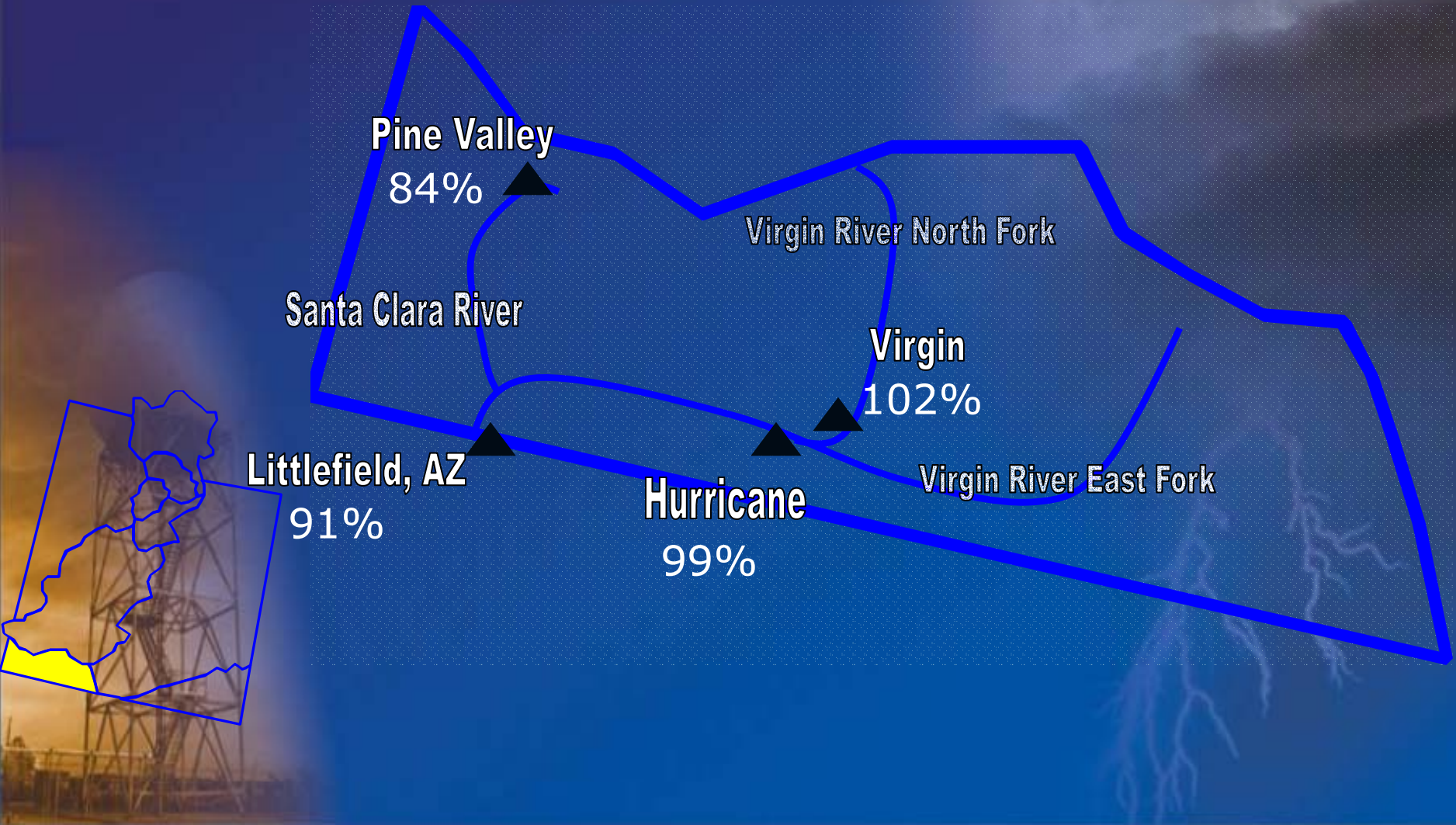
# Forecasted Utah Spring Snowmelt Runoff Volume

January 1<sup>st</sup>, 2004

April Through July Volume Forecast

Percent of 30 Year Average Flows

## Virgin River Basin





# How do you create a long range forecast?

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•PDO

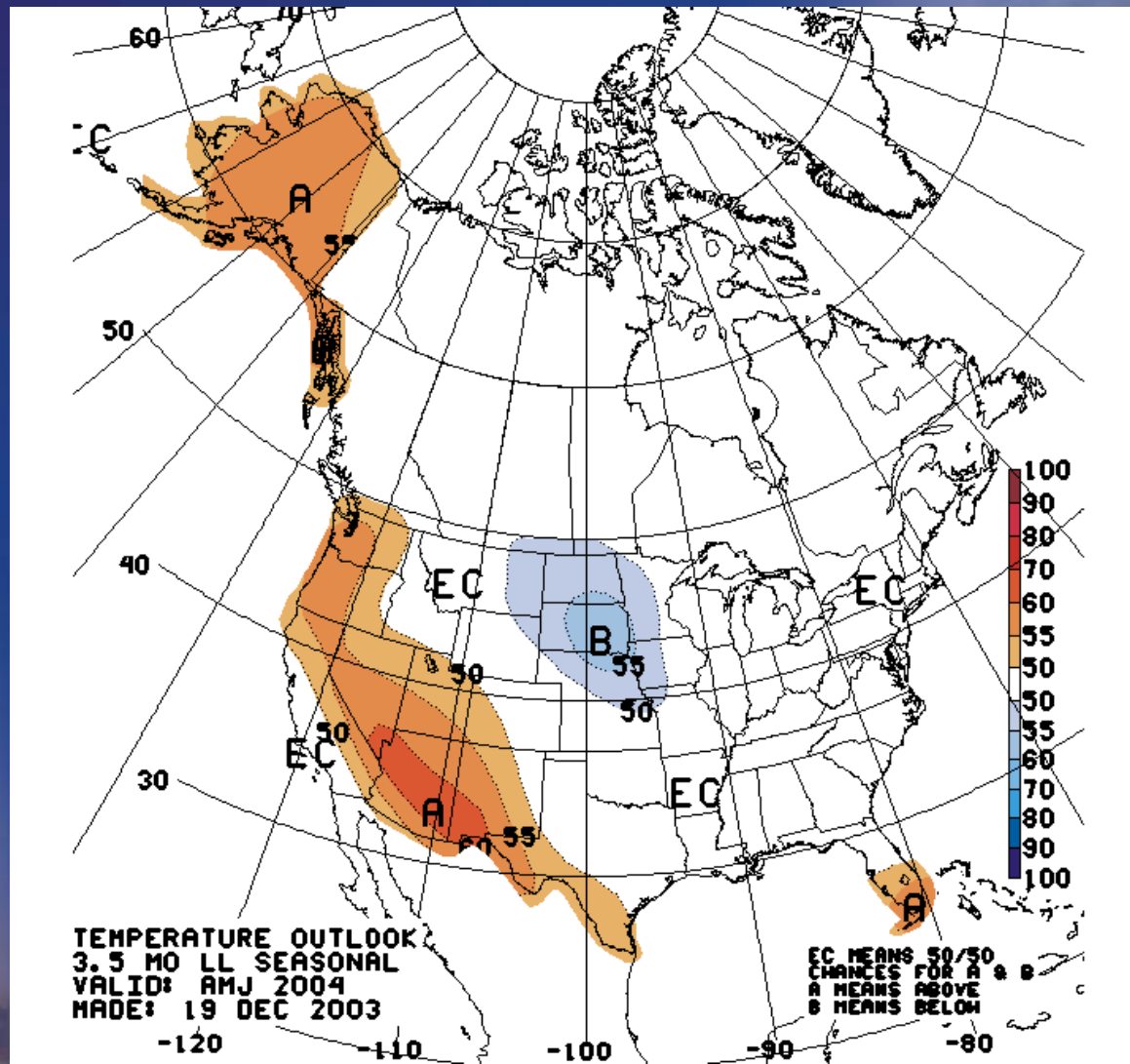
•NAO

•ENSO

•MJO

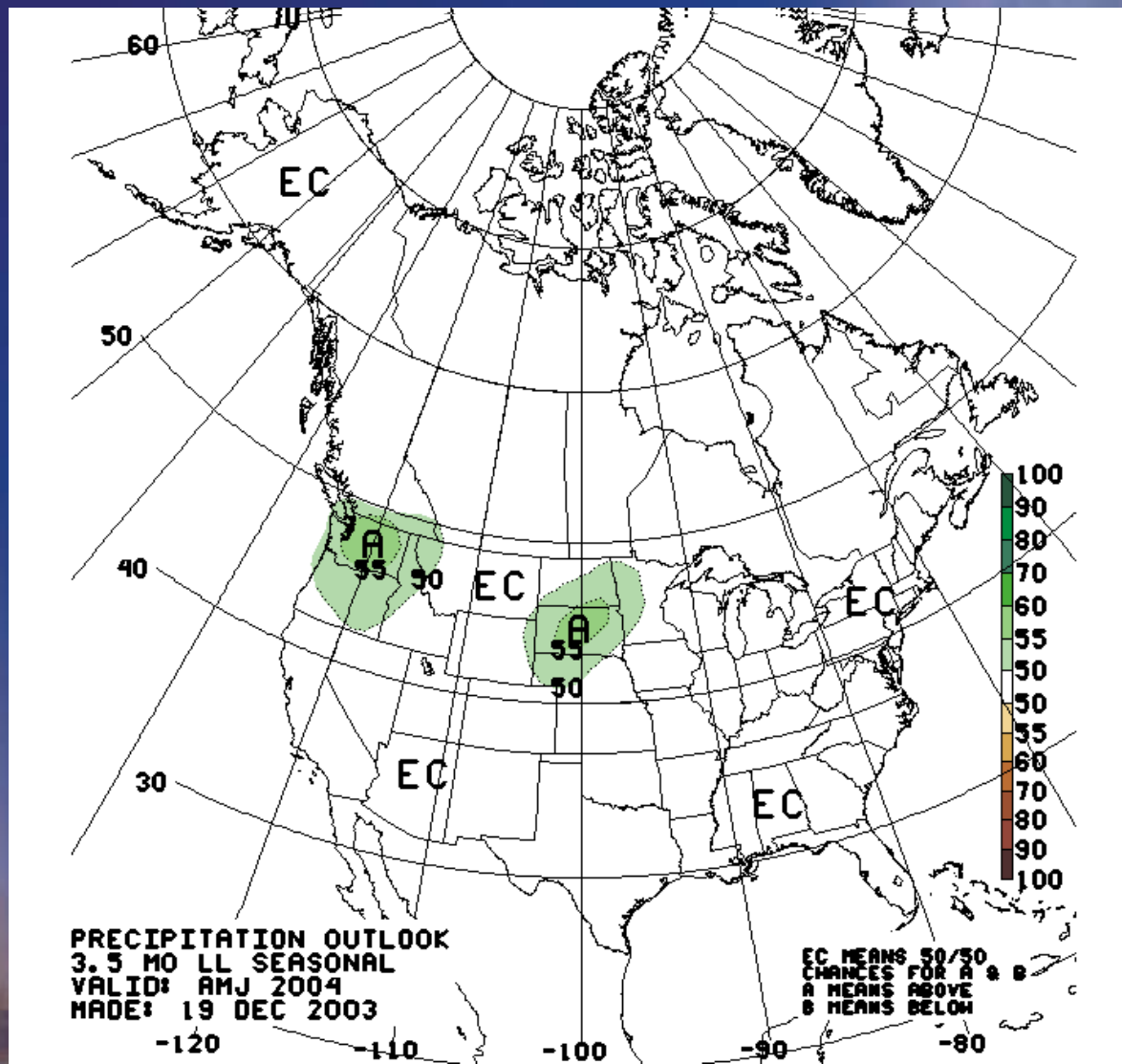


# Long Range Temperature Forecast





# Long Range Precipitation Forecast







# Summary

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- Snowpack is very healthy at this juncture
- Low elevation snowpack is highest in years
- Approximately 50% of snow collection season remaining
- Soil moisture deficit is moderate to high
- Spring climate will be a major force in the amount of streamflow volume to populate reservoirs
- Long range forecast does not point to below average precipitation
- Madden Julian Oscillation moderately active.



# Contact Information

<http://www.wrh.noaa.gov/Saltlake/river/presentations>

## Additional Information

### Contact

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